

The Loyal Editor Effect: Russian Online Journalism after Independence
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Notes to editor: sources cited in the appendices are *included* in the main bibliography. I think the appendices work best as online supplements, rather than at the end of the text. Should the editor disagree I will of course be happy to change my mind on this. It would be helpful if the appendices were included for review purposes. Figures are included separately from the article body, and captions are at the foot of the article.

Abstract

This article investigates what effect pressure from owners - via loyal editors, had on journalistic output at the popular Russian online newspapers *Lenta* and *Gazeta*. Using novel methods to analyse a dataset of nearly 1 million texts from the period 2010-2015, this article separates the effect of a changing news agenda from new editorial priorities. Statistical tests show that changes in output coincide temporally with editorial change, and that the direction of change sees new editors move away from publication patterns associated with other independent outlets. In both *Gazeta* and *Lenta*, editorial changes were accompanied by a move away from core news areas such as domestic and international politics, towards lifestyle and human interest subjects. The loyal editor effect resulted in a 50% reduction in coverage of controversial legal proceedings, together with the business dealings of Russian elites.

Keywords: Russian media, independent media, *Gazeta*, *Lenta*, journalism, editors

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Introduction

In 2013 *Lenta.ru* and *Gazeta.ru* - henceforth *Lenta* and *Gazeta* - were the two most popular online news outlets in Russia (Medialogia, 2013). Both had a reputation for high-quality journalism and were known for their editorial independence. Since 2013 a lot has changed. In its 2012 report on Russian media, *Freedom House* noted that since the presidential elections in 2012, most popular online media, social media, and social-networking sites in Russia had come under “oligarchic control”, which raised “concerns about the Russian Internet’s vulnerability to political manipulation” (Freedom House 2012). In March 2013, *Lenta* and *Gazeta* were placed under single ownership through the merger of Vladimir Potanin’s *Afisha-Rambler* and Aleksandr Mamut’s *SUP Media*. Also in March, the editor of *Gazeta* resigned, citing “disagreement with the leadership” (“Uvolilsia glavnyi...” 2013). One year later, In March 2014, *Lenta*’s editor was dismissed; most of *Lenta*’s journalistic staff resigned in protest. Over the next year, new editors introduced sweeping changes at both outlets.¹

¹ By late 2014, both *Lenta* and *Gazeta* had dropped behind the online publication *RBC* in Medialogia’s rankings.. In May 2016, after the analysis for this article was completed, three top *RBC* editors were sacked, apparently following pressure from the Kremlin. In a move mirroring the changes at *Lenta* two years earlier, a number of journalists resigned in protests. According to media speculation, the sackings were in response to investigative journalism which exposed the wealth of Putin’s associates, the true identity of his daughters, and delved into the Panama papers (Seddon, 2016).

Much of the academic literature on Russian media, both quantitative and qualitative, is founded on comparisons between loyal to the state, and independent publications. Any such comparison is impaired by the complexity of news media: publications have their own quirks, emphases, and interests. Separating these from political allegiance may be hard or impossible. With this in mind, the editorial changes at *Lenta* and *Gazeta* offer rare opportunity to look at within-case variation. In this article I take the first steps towards quantitatively analysing the breadth of Russian media content. Working on a dataset of nearly 1 million texts from the period 2010-2015, I explore what effect pressure from owners - via loyal editors, has on journalistic output. Using a statistical approach, I separate the effect of a changing news agenda from new editorial priorities, allowing fresh insight into what issue areas are the first to disappear when the Kremlin takes over control at news outlets.

To date, few attempts have been made to apply automated approaches to Russian language texts, in part due to warranted scepticism as to their accuracy, but also due to a lack of capacity. In a recent work on Russian Internet activism, Sarah Oates underscored how the growing capability of automated methodologies made analyses of a few thousand texts appear quaint, yet proceeded to note that the sheer quantity of information available online was “overwhelming” and “resists easy quantification” (2013: 136,164). A small number of political scientists have conducted automated content analyses of Russian language sources (e.g. Stewart and Zhukov 2009, Baturu and Mikhaylov 2014), though there has not previously been a systematic attempt to quantitatively survey the breadth of Russian media output. The preferred approach has been content analyses, which, even when large scale, prioritise individual issue areas. For instance, Tolz and Harding (2015) analysed expressions of Russian nationalism as expressed in a database of *Channel One (TV1)* news reports.

The article begins by outlining the ownership history of *Gazeta* and *Lenta*, and proceeds to an overview of how and when Mamut introduced editorial change. Next, I introduce the sources and methods used in the analysis. The main body of the article presents evidence from three data sources: article metadata shows which sections (e.g. politics) saw the biggest reductions and increases following the change. Keyword analysis helps pinpoint the terms to which the new editors were more reluctant or inclined to direct attention. I use a topic model to approach this problem from a different angle by identifying clusters of terms or subject areas that saw unusual patterns under new editors. I use the topic model output to identify topics most often discussed by independent outlets, and use a bayesian structural time series model to identify whether and to what degree editorial change resulted in these topics disappearing from *Gazeta* and *Lenta*.

In the recent literature on Russian media, *Gazeta* and *Lenta* have often been termed “independent” or even “oppositional” publications (Federman 2010; Media Compass 2014; Toepfl 2011, Schenk 2012). Outlets with the loosest ties to the state are more likely to print dissenting or outright oppositional content, and less constrained in expression of political ideas. During the 2000s *Gazeta* enjoyed considerable editorial independence and gained a reputation for publishing opinion pieces critical of Putin’s government. A closer look at *Lenta* and *Gazeta*’s ownership history illustrates that these outlets have never enjoyed financial

independence. Ever since their founding in 1999, *Gazeta* and *Lenta* have been owned by individuals with close ties to the Kremlin. Individuals, moreover, whose wealth depended on good relations with the authorities. The editorial changes analysed in this article were brought about by a change in the type of control the Kremlin exert over news media: the latent control provided by ownership was activated by imposing “loyal” editors (Fredheim 2016). In this regard, the mechanisms used to assert control over Internet media were identical to those applied to television and print media a decade previously (Federman 2010).

Background and the Mamut takeover

Gazeta and *Lenta* were both founded in 1999 by the Internet entrepreneur Anton Nossik. While *Gazeta* was the first fully digital newspaper in Russia, *Lenta* started out as a news only site - a news aggregator - staffed by editors rather than reporters, who rewrote newswire stories for a Russian audience (Arutunyan 2009, p.155). Both projects were bankrolled by the *Foundation for Effective Politics*, an organization owned by Marat Gelman and PR guru Gleb Pavlovsky. In 2002, Gelman and Pavlovsky parted ways through a share swap that saw Gelman take partial control of *Lenta*, and Pavlovsky the *Foundation*. That same year, *Rambler Media* listed *Lenta* as part of its holdings. At this time, *Rambler* was controlled by the investment company *Russkikh Fondov*, part-owned by Sergei Ivanov, Chief of the Presidential Administration (2011-). In 2003 Yuriy Lopatinsky of *First Mercantile Capital Group* acquired a controlling stake in *Rambler*. In 2006 Vladimir Potanin’s *ProfMedia* took control of *Rambler*, and with it *Lenta*.

Gazeta followed a different trajectory: The *Foundation* offloaded the site to the oil giant Yukos in the early 2000s. In 2005, when Yukos owner Mikhail Khodorkovsky was sentenced to nine years in prison for tax evasion, Vladislav Borodulin, editor-in-chief of the business newspaper *Kommersant*, bought *Gazeta*. In 2006, the oligarch and part-owner of Arsenal Football Club Alisher Usmanov bought *Kommersant*, and, soon after, *Gazeta*. In 2008, *SUP Media* acquired *Gazeta* from *Kommersant*, in exchange for a large stake in *SUP Media* (Anufrieva and Malakhov 2008). Only in 2012, when Mamut sold his shares in the mobile phone chain *Evroset* to Usmanov, did he gain a controlling stake in *SUP*. In April 2013, *SUP* merged with *Rambler-Afisha* leaving Mamut in sole charge of Russia’s main internet portals. It was at this point that Mamut appointed Aleksei Goreslavsky deputy general director for external communications of the new holding (“Rambler-Afisha ob”edinilas” 2013). Although there had been some editorial change at *Gazeta*, Mikhail Kotov, editor from July 2010 to March 2013, was part of the original team that launched the site in 1999. Rumours about high-level interference began swirling at the time of the 2011 Duma elections when an editor was fired for refusing to place United Russia ads on the site’s home page. In March 2013 Kotov resigned in protest at a restructuring of the newspaper, under which the editor lost direct control over marketing. Kotov’s replacement, Svetlana Lolaeva, was only in charge for a few months (“V den’ vyborov” 2013). Following her dismissal in September 2013, she described how Mamut had warned journalist to tone down the liberal rhetoric (Shepelin 2013). Her comments also cast light on Mamut’s motivations: he had told her he took no issue with her work, but that he needed someone he could trust (Afanas’eva, Boletskaya, and Golitsyna 2014).

That someone was Svetlana Babaeva. Previously of *Izvestiya* and the state owned news agency *RiaNovosti*, Babaeva introduced rapid changes at *Gazeta*. According to the journalist Viacheslav Kozlov she “replaced most of *Gazeta.ru*’s columnists, and the commentary section sometimes runs articles by Vladimir Markin, the press officer of Russia’s Investigative Committee” (Kozlov 2014). In March 2013, 75 of 79 regular contributors² to *Gazeta* had been with the site since at least 2010. Six months later, 23 had left - six times the number for the previous three years. By September 2015, only 13 of the old-timers were still regularly contributing, and only 1 of these 13 wrote about politics. Leaked emails and text messages analyzed by *The Insider* show that Goreslavsky acted as a direct link between Babaeva and the Presidential Administration. Now the Kremlin could insert its message directly onto the *Gazeta* front page. For instance, one set of emails appears to show Goreslavsky passing on a request for an editorial rebutting criticism of the Sochi Olympics (The Insider 2015a). It was published the next morning (see *gazeta.ru* 2014).

Galina Timchenko had worked for *Lenta* since its launch, and as its editor since 2004. In March 2014 she was dismissed and replaced by Goreslavsky. Most of *Lenta*’s journalistic staff resigned in protest (‘Dorogim chitateliam’ 2014). When Goreslavsky replaced Timchenko, he told staff he would “act in the interests of the shareholder [Mamut, -RF]”, and that the shareholder wanted Timchenko and the journalist Il’ya Azar out (Dement’eva and Gorbachev 2014). According to a source at the Russian Internet watchdog *Roskomnadzor*, in firing Timchenko “Mamut drew on his political intuition” (Kozlov 2014). That is, there was no direct order from the Kremlin. This suggestion that Mamut acted of his own volition is undermined by email leaks that appear to show that he was pressured into sacking Timchenko. *The Insider* quotes a message from the Presidential Administration: “*Lenta* has a stance on everything, Galia [Timchenko] keeps saying she must maintain her standards. The issue has been brought before the shareholder [Mamut]. I am doing what I can” (The Insider 2015).

The email leaks show how the Kremlin applied pressure on editors through pliant newspaper owners. Journalists at *Lenta* described how Timchenko let them “get on with work”, that “she took the blow”, and that they “never felt that pressure” (Dement’eva and Gorbachev 2014). Lolaeva’s described how *Gazeta* had been “incredibly pressured” during the protests before Putin’s re-election in March 2012 (Shepelin 2013). By all accounts, one reason for Timchenko’s popularity at *Lenta* was her ability to shield journalists from the owner.

What effect did pressure from owners have on journalistic output? For all the reports exposing links between editors and the Presidential administration, scant attention has been paid to changes in content. Media reports about the upheaval at *Lenta* vaguely stated that the publication’s line had shifted. *Freedom House* wrote in its annual report on the state of Russian media that “the site adopted a pro-Kremlin line under new management” (Freedom House 2015). The *Independent* noted that under Goreslavsky’s editorship “*Lenta* has taken a

² Defined as authors who published at least five article over the previous four month period.

decidedly loyal turn” (Carroll 2015), and the *Jamestown Foundation* claimed *Lenta*’s content was “remarkably similar to that published by government-controlled outlets in Russia” (Tlis 2014). The *Financial Times* quotes Anton Nossik on the changes at *Gazeta*: “[Mr Goreslavsky] moved in and fired the chief editor, made replacements and changed the guidelines. And now *Gazeta.ru* is not very different from any government-run, government-sponsored media. You can predict its stand now on any issue in which there is an official Kremlin position” (Weaver 2014).

Spin and substance

Observers familiar with the Russian media can predict what spin *Gazeta* and *Lenta* will now apply to breaking news stories. But can the effect of direct editorial control be distilled into anything more tangible than “pro-Kremlin sentiment”? What changes should we expect when critical journalists leave or are forced out? One possible clue comes from the man charged with carrying out the changes at both publications, Aleksei Goreslavsky. Goreslavsky cut his teeth at the *Vzglyad*, an online newspaper with overt ties to the Kremlin. His successor at the publication, Aleksandr Shmelev, listed two principles as fundamental to pro-Kremlin propaganda during Putin’s second term (2004-08):

- 1) We base our reports on real facts and don't make up events that didn't take place, nor do we ignore any important news.
- 2) However, we are not impartial. We openly support the current regime and interpret every news story through that prism: we look for arguments in favour of the regime's decisions and actions, and ways to discredit [*zamochit*] its critics (Morozov 2013).

According to Shmelev, pro-Kremlin outlets cover the same news stories as other outlets, but their coverage is systematically distorted. To the extent that the loyal editor effect consists of refracting news through a prism sympathetic to the Kremlin, this analysis may not unearth much. I make no attempt to quantify spin, exploring instead the degree to which, if at all, quantitative methods can reveal the impact on output introduced by editorial changes at previously independent news sites. In rather stylized terms, the null hypothesis is that the editor effect is all spin and style, and there will be little change in the subject of output; conversely, the alternative hypothesis is that editorial change is accompanied by substantive change in news reporting.

What might we expect this change to look like? Russian media today, the journalist Oleg Kashin argues, only pursue ratings and sensational stories. This phenomenon, once restricted to the tabloids, now characterises all Russian media (Kashin 2015). In its 2013 Russia report, Freedom House characterised state-media as “largely filled with either apolitical entertainment or pro-Kremlin propaganda, avoiding coverage of protests by members of a rising urban middle class who demanded better public services and less corruption” (Freedom House 2013). In this assessment, we should expect *Gazeta* and *Lenta* to replace coverage of issues concerning Russia’s urban elites with transparent praise for Putin, accompanied by a dose of uncontroversial, fun stories.

Methods

The comparison

The editorial changes at *Gazeta* and *Lenta* provide a natural experiment to measure what effect a loyal editor has on news reporting. In the text I refer to the period before editorial change as the “early period”, and that after as the “late period”. For *Lenta* the division is straightforward, into the period before and after March 2014, omitting the transitional month of March. For *Gazeta* I use a much longer transitional period: the early period ends at the time of Kotov’s departure in March 2013, and the late period begins in October 2013, after Babaeva’s arrival. The advantages of using separate periodisation are two-fold: firstly, it more accurately captures the timing of editorial change, and secondly it helps separate the loyal editor effect from that of external events coinciding with the changes, such as the annexation of Crimea in March 2014.

I use three distinct quantitative approaches to compare reporting. In the first instance I compare the number of articles in the different newspaper categories. This analysis will expose any sweeping realignment of emphases, e.g. from domestic to international politics, or from sport to fashion. Any straight-forward before and after analysis is complicated by a changing news agenda. The early period was dominated by the 2011-12 elections and subsequent protests, while the late period saw round-the-clock coverage of the conflict with Ukraine, Western sanctions, and the assassination of opposition politician Boris Nemtsov, to name but a few examples. To account for the news agenda, I compare coverage in *Gazeta* and *Lenta* to that of a range of other publications. The idea is that if we know how much coverage each paper devoted to a given event in the past, for instance the Bolotnaya protests following the disputed Duma election in 2011, we can extrapolate to identify anomalous change in coverage of other events, e.g. the assassination of Nemtsov. In order to systematically identify comparable subjects, I use an impressionistic text-based approach in keywords, in conjunction with a mathematical abstraction as calculated using a topic model. Finally, I conduct statistical tests to accept or refute the hypothesis that subject areas characteristic of independent journalism disappeared from *Lenta* and *Gazeta* under new editors.

Data collection and article selection

Data for this paper were collected in March 2016 using scripts customized to each media outlet. In each case the following fields were collected: author, date of publication, article category, article body, and the article url. Article content was identified using html style tags. Thus any adverts, quotes, or other content embedded within the article body were omitted. Not all online newspapers have a sports section, and not all have a news-ticker. In order to get an evenly balanced sample, a careful filtering process, detailed in Appendix 1, was used to remove newswire stories, sports sections, horoscopes, video and graphical content, and very short texts. All words were normalized using a part of speech tagger to replace conjugated and declined words with their dictionary forms (Korobkov 2013).

The reference categories

To isolate the effect of editorial change, I compare output at *Lenta* and *Gazeta* to a number of other Russian media outlets: a group of state-controlled or oligarch-owned media sources

made up of *Vzglyad*, *TVI*, *Rossiiskaya Gazeta*, *Izvestiya*, *Lifenews*, *Komsomolskaya Pravda*, and *Kommersant*, and one of independent outlets, consisting of *Novaya Gazeta*, *Vedomosti*, and *Grani*. The inclusion of the high-brow and often liberal *Kommersant* in this category makes for a tougher test; including *TVI* ensures the findings are generalisable to the most important media, not just online newspapers. In total the data-set consisted of 817,434 articles. See Appendix 2 for a full overview of the reference publications.

The reference publications were selected for three reasons: firstly, they represent a band of opinion stretching from the openly oppositional via business-dailies to state-run news media.³ Secondly, each outlet has published relatively consistently and evenly across the period 2010 - 2016 (see Appendix 3), and thirdly, it is possible to access their archives and collect articles programmatically.⁴ The reference publications are used to identify the substance of any change in output by identifying which keywords and topics are disproportionately associated with state-controlled and independent outlets. Secondly, I use them as multiple control time series for a bayesian time series model to estimate the proportion of change per topic attributable to the editorial intervention (Brodersen et al 2015).

I use three automated approaches to complement subjective readings of individual texts: newspaper metadata, keywords as calculated using TF-IDF, and a topic model. Together these methods - the first through aggregation, the second impressionistically, and the third algorithmically - identify which parts of news coverage were the most impacted by editorial change.

Newspaper metadata

All the media outlets considered implement some form of filing system: *Gazeta* divides its output into categories that include Politics, Culture, and Technology. Each article is associated with only one category. These category data provide a crude measure of a newspaper's focus. I use them to measure aggregate movement within a publication, e.g. from an emphasis on culture to one on economics.

Keywords

A keyword is a term abnormally frequently seen within a given text compared to what one might expect based on a reference collection or corpus. Keywords allow the researcher to distinguish between texts about Putin and texts that merely mention Putin. Here I use the simple and popular TF-IDF formula. Pioneered by Salton and McGill (1983), TF-IDF combines two intuitively significant measures: Term Frequency (TF) and the Inverse Document Frequency (IDF). "Term Frequency" is a count of how many times words occur in a text. Ranking words by frequency words makes no sense for common words such as conjunctions and pronouns. This shortcoming is compensated for through the Inverse

³ The classification is based on the *Calvert Journal's* typology of the Russian media landscape 'Media Compass' (2014), where outlets were classified on two axes, from independent to state-controlled and from low to high-brow.

⁴ For this reason *Slon*, owned by Natalia Sindeeva, could not be included as most of its content is behind a paywall.

Document Frequency, a measure of how common words are in usage, as measured by a reference corpus. For each article I selected the ten words with highest TF-IDF score as keywords.

Topic model

Keyword analyses suffer from at least two major drawbacks: firstly, there is an almost infinite number of possible keywords, and secondly, they strip words of contextual, linguistic, and discursive relations with the rest of the material. To overcome these challenges I use a topic model to identify varying coverage about subject areas. A topic model lends itself to this task for four reasons: the algorithm used, though complex, is transparent and its output broadly reproducible; it is automated and therefore relatively efficient; it is an inductive method, lending itself to hypothesis testing; and finally, it accounts for variation in meaning and discursive usage (DiMaggio, Nag, and Blei 2013, p. 577; Blei and Lafferty 2007). The topic model algorithm aims to accomplish two tasks: firstly, to group words that tend to occur together within a collection into topics, and secondly to estimate the degree to which each text in the collection exhibits each topic. One such topic might be Fishing: Fishing is the label I subjectively applied to the topic, based on the terms that predict this subject matter with a high probability: fish, boat, line, hook, fisherman, etc. Before analysing the topic model output, I labelled and validated the individual topics (following DiMaggio, Nag, and Blei 2013). For the purpose of this article, it will suffice to think of the topic model output as a mathematical abstraction reflecting the probability that a given text exhibits a given semantic field. For an explanation of how topic modelling works, the exact implementation used, and an overview of the topic model output, please see Appendix 4.

Results and Discussion

Article categories

Did editorial change result in any sharp changes in publication focus? Figure 1 shows the proportion of each publication's output split according to each online newspaper's own article categories. Editorial change at *Gazeta* was accompanied by a reduction in the size of the business, politics, and social sections. This reduction was offset by a much higher proportion of articles in the technology, science, opinion and real estate sections. *Lenta* also reduced the number of reports about domestic and world politics, though the reduction in the Russia and World categories might be accounted for by coverage of the Ukrainian conflict being filed under the new "forces" (silovye struktury) category, or the Former USSR category. Output under the media category has halved, while the lifestyle and culture sections have swollen. In both cases, the editorial changes have been accompanied by a substantial move away from core news areas and into lifestyle and human interest subjects.

[FIGURE 1 here]

Keywords

To identify over- and under-represented terms, I calculated how much more or less often the reference publications had published articles about a keyword than *Gazeta* or *Lenta* during the early period. Using these estimates I extrapolated how many keywords we might expect

based on the ratio calculated for each group of reference publications, and contrasted this figure to the observed number. By ranking these scores I found the keywords exhibiting the most anomalous levels following the change. Because multiple extrapolations from low base figures yield noisy estimates I restricted the analysis to very common keywords where the estimates based on independent outlets, and those based on state-controlled outlets pointed in the same direction, both for coverage in *Lenta* and *Gazeta*.⁵

Take an example: before the takeover, *Lenta* published 73 articles where “insurgent” was a keyword; *Vedomosti*, *Grani* and *Novaya Gazeta* published only 93 such articles, which yields a ratio of about 7:9. In the period following Timchenko’s dismissal, *Vedomosti*, *Novaya Gazeta* and *Grani* published 34 articles about insurgents, compared to only 1 in *Lenta*. Based on the initial ratio calculated, and the value observed for the independent publications, we would have expected approximately 25 *Lenta* texts about insurgents, a figure many times greater than the observed value. In the context of the Ukrainian conflict, “insurgent” was a loaded term, and to readers familiar with the language preferred by Russian state media to describe the separatists in eastern Ukraine it will be unsurprising that the rise in usage was much steeper for Independent outlets than for State-controlled outlets. The group of state-controlled outlets published 247 articles in the early period and 28 articles in the late period. Based on these figures, we would expect 8 *Lenta* articles, a number that remains higher than the observed figure of 1, but is closer than that estimated based on independent outlets. The observed value is well below the projections based on the independent and the state-controlled reference group.⁶

The keywords overrepresented in *Gazeta* and *Lenta* after the editorial change, as measured against the reference publications, are grouped in Table 1; Table 2 shows the most underrepresented keywords (See Appendix 5 for the Russian originals). Accounting for the news agenda and past publication patterns, *Gazeta* and *Lenta* share a change in emphasis away from economics, finance, law, and crime, and towards lifestyle subjects. In particular, consumer goods, living costs, and real estate emerged as major new issue areas. More space is dedicated to health and wellbeing, human interest stories, and a number of historical figures, notably Stalin. Emotive terms such as rape, war, fear, and conflict may reflect a move to more sensational reporting.

Coverage of the world of business and big finance - especially with regards mergers and acquisitions, state corporations, corruption, and natural resources - dropped dramatically, together with reports on court cases, a few elites figures, and the media. Collectively the keywords in table 2 hint at a decisive move away from reports about both formal and informal financial and legal arrangements. Ownership and control of media outlets appears a

⁵ The tables show keywords present in at least 100 articles from the early period, in both the independent and the state-controlled group, and that were at least 50% over or under-represented following the change in both *Gazeta* and *Lenta*. Results obtained in this manner should be treated as impressionistic rather than statistically significant due to a high number of tests being performed.

⁶ When doing the calculations I used proportions rather than raw numbers to account for changing sample size.

fading concern, as suggested by reductions for media specific keywords (Editorial staff, *Kommersant*, TV-channel, publishing [house]), a number of media-owning oligarchs (Potanin, Usmanov), and certain journalists (Kiselev, Timchenko). The shift from business to personal finance gives nuance to the category changes presented in Figure 1. In *Lenta*'s case, the size of the business section remained roughly constant, but the relative absence of the terms in Table 2 suggest reporting may be less forensic in nature.

[TABLE 1 here]

[TABLE 2 here]

Topic model

The topic model aims to cover the entire range of subjects observed within the dataset. For this reason, there are topics about Russian elites, celebrities, the weather, the ocean, industrial production, and all other subjects often in the news.

There are five topics that *Lenta* and *Gazeta* both used to write a lot about in the past, but virtually stopped writing about after the editorial change: Court cases, Citizens and the State, Business deals, Violent crime, and Media. Articles about the Court cases topic are predominantly investigative pieces abuses of the legal system, corruption, and politically motivated sentencing (See Appendix 4 for full overview). Business deals - a topic predicted by the keywords "company, share, billion, million, deal, market", is common in stock market reports, especially those involving large mergers, controlling stakes in large companies, or the hidden wealth of the Russian elite. The Violent crime topic covers all sorts of acts of violence that result in police investigations, from drunken brawls to political murder. Articles about Citizens and the State (predicted by the words "person, Russia, the people, country, case, power") center on philosophical issues and political decisions confronting individual Russian citizens, such as questions of patriotism, and analyses of the elites' response collective action, in particular to the popular protests of 2011-12. Finally, articles about the topic media ("journalist, newspaper, channel, tv-channel, edition, program") include overviews of the foreign press, sacking of journalists, changes in ownership and editors, and media legislation. In sum, the topic model output points strongly towards cuts in investigative reporting about injustice, crime, corruption, and big finance under new leadership. Twenty topics, meanwhile, received much greater than expected attention under new editors. Prime among these is the topic Food, which received 10 times more attention in *Lenta* and 3 times more attention in *Gazeta* than it had previously. There were also strong increases for lifestyle subjects such as Fashion, Health, Medicine, Family, Cars, Animals and nature, Weather, Science, Music, Mobiles and apps and Cinema. Two human interest topics, Personal choices and Life stories, together with a newfound interest in historical themes (USSR, WW2 and veterans, and History) cement the impression that both *Gazeta* and *Lenta*'s focus has been diverted from news and current affairs (see Appendix 4).

Undeniably, editorial change coincided with a move to a greater diversity of content in both *Gazeta* and *Lenta*, but at least two questions remain: did output at *Gazeta* and *Lenta* change

from resembling that of the independent group to more closely mirroring the state-controlled publications? And if it did, can this change be causally attributed to editorial change, rather than just a changing news agenda, or a gradual change in focus?

To test whether changes at *Gazeta* and *Lenta* moved further away from an independent agenda, I identified topics disproportionately common in the group of independent publications, before determining whether these same topics disappeared from *Gazeta* and *Lenta*. I define *independence likelihood* for a topic as the probability that an article is published by an independent outlet. The topic-wise independence likelihood values, with bootstrapped 95% confidence intervals, are visualised in Figure 2. Topics are ranked from highest to lowest topic-wise independence likelihood, centered around a vertical line at 30%, denoting what we would expect if all topics were had the same independence likelihood.⁷

[FIGURE 2 here]

Figure 2 shows that the topics associated with the greatest likelihood of being published by an independent news-site are Protest movement, Court cases, Citizens and the State, and Business deals (see Appendix 4). Readers familiar with the Russian media-landscape may not be surprised by this finding: high-profile corruption scandals, miscarriages of justice, together with the fading hopes that a groundswell of popular resentment might force Putin out of office have for more than a decade been staples of the Russian liberal's news consumption. However, it is worth noting that the subjects with the highest independence likelihood are the same topics that disappeared from *Lenta* and *Gazeta*. At the other end of the scale, topics pointing to the experience of everyday life in Russia dominate state-controlled outlets.⁸ Again, *Lenta* and *Gazeta* both produced many more articles about topics such as Health, Food, and Holidays under new editorship.

To test whether editorial change resulted in *Lenta* and *Gazeta* publishing less about topics with a high independence likelihood, I used a Bayesian structural time series model, developed by a team at Google (Brodersen et al. 2015) to quantitatively estimate the loyal editor effect. The model estimates the effect size of an intervention on a time series by contrasting a response time-series to a number of control time-series. In this case, the response time-series is the number of articles about a topic each published by *Gazeta* or *Lenta*, while the control time-series are the equivalent counts for the reference publications. These control time-series capture unobserved causes not directly included in the model, in particular a changing news agenda, but also other factors that might affect all news coverage,

⁷ There are three publications in the independent group and seven in the state-controlled group. Three in ten is 30%.

⁸ One explanation might be that the groups cut unevenly across the highbrow-lowbrow divide: *Lifenews* and *Komsomolskaya Pravda* skew findings towards the sensational and popular. For the purposes of this article, this imbalance is unproblematic, as the relationship is stable: *Komsomolskaya Pravda* was as much a tabloid in 2012 as in 2015.

e.g. media laws.⁹ I ran the model to quantify the editor effect at both *Gazeta* and *Lenta*, for the four topics with the highest independence likelihood, that is, Protest Movement, Court Cases, Citizens and the state, and Business deals. I define the *loyal editor effect* as the estimated cumulative relative effect of editorial intervention.

The editor effect for articles in *Lenta* about Court cases is visualised in Figure 3 below. The dotted line shows the expected proportion of articles about a topic (the counterfactual), based on the reference publications. The shaded area represents the central 95% credible interval - the area within which we would expect *Lenta*'s output. The vertical dotted lines denote the endpoints of the early and late periods.

[FIGURE 3 here]

The confidence interval shows that individual observations are within the margin of error; however, since editorial change took place, the attention paid to this topic has flatlined, near 0, and consistently undershot the expected values. Cumulatively the estimated editorial effect for this low trajectory is -75.6%; the 95% credible interval for this percentage is -18.1% to -127.8%.¹⁰ Thus according to this estimate, a $\frac{3}{4}$ reduction in the article volume about the Court cases topic can be attributed to the loyal editor effect. The probability of obtaining this result by chance is one in a thousand ($p=0.001$). The distribution of articles about the Court cases topic shows the stark and immediate impact editorial change had at *Lenta*. The Court cases topic typically occurs in articles documenting miscarriages of justice. The inquiries into the murder of Anna Politkovskaya were especially strongly represented, as were the proceedings initiated against the organisers of the Bolotnaya protests. Throughout the period 2010-2013, *Lenta* and *Gazeta* both regularly reported on these and related stories, as is reflected by the series of spikes in Figure 3. Following editorial change, the output volume about this topic dropped dramatically. This change realigned *Lenta*'s coverage with other state-controlled outlets, which rarely wrote about this topic. In 2015, *Grani* and *Novaya Gazeta* repeatedly commented on the court cases initiated against Ukrainian filmmaker Oleg Sentsov and fighter pilot Nadiya Savchenko. This attention was not mirrored *Lenta*, as indicated by the space between the lines denoting the observed and expected values.

Coverage of the Savchenko trial - in which the fighter pilot and Rada deputy stood accused of murdering Russian journalists - illustrates a hitherto overlooked point: *Gazeta* and *Lenta* may have lost their liberal credentials, but they have not been transformed into fully-fledged propaganda vehicles. Other liberal outlets, such as *Novaya Gazeta*, argued the trumped up charges were designed to satisfy Russian revanchist urges. An *OpenDemocracy Russia* editorial summarises the importance of the Savchenko case: "this show trial crowns a campaign by the Russian state to persecute Ukrainian citizens, sealing the regime's reputation as a protector against the 'fascism' of Maidan" (Antonova et al. 2016). Pro-Kremlin outlets,

⁹ The model assumes that the editorial intervention had no impact on the other publications' output.

¹⁰ Of course, a reduction of more than 100% would be illogical.

such as *Vzglyad* and *Lifenews*, repeated the line that Savchenko was a crazy Russia-hater and war criminal who disrespects the legal process (Ostal'tsev (2016) likened her to a monkey: "Savchenko ... bounces on her chair like an orangutan"). *Lenta's* liberal reading of the case was replaced by silence, not by the Kremlin line.

Changes in editorial positions have been gradual: *Lenta's* just-the-facts approach to the news meant the old *Lenta* had relatively little political commentary; the new *Lenta* has more, and it tends to be of a pro-Kremlin slant. *Gazeta*, on the other hand, had the reputation for giving voice to oppositional firebrands. *Lenta's* coverage of topics about domestic politics point in a different direction to that of *Gazeta*. Under new leadership, *Lenta* published significantly more articles about topics such as Duma politics, Elite power, Reform, Putin and the Russian government, and Region. The opposite is true for *Gazeta*, where these topics were the subject of significantly fewer articles (see Appendix 4). Although the new *Gazeta* rarely gives voice to liberal views, some critical voices kept their columns, notably former *Novaya Gazeta* duo Andrei Kolesnikov and Semen Novoprudskii. In this way, *Lenta* has become substantially more politicised, *Gazeta* a bit less so. Neither outlet suddenly adopted editorial positions polar opposite to their predecessors. Rather than contradicting former firmly held positions, they often fell silent.

Court cases are evidently a topic where editorial change has been accompanied by sudden reductions in coverage, but is the same true for the other topics with the highest independence likelihood? The answer is tabulated in Figure 4, which shows that for both *Lenta* and *Gazeta* the estimated loyal editor effect is negative for the four topics with the highest independence likelihood. The only marginal exception is the Protest movement topic, for which the editorial effect in *Lenta* is only marginally significant ($p=0.063$). This effect is marginal because of high variance caused by bursts in coverage, first in response to the massive protests against falsified election results in December 2011 and March 2012, and later in coverage of legal proceedings initiated against the protest organisers.

[FIGURE 4 here]

In sum, all the tests for *Gazeta* and three for *Lenta* show significant and sharp reductions in coverage about topic-areas with the highest independence likelihood. The topic with the largest effect and smallest credible interval is Business deals (-60% in *Lenta*, -70% in *Gazeta*), followed by Court cases (-75% in *Lenta* and -50% in *Gazeta*), the Protest movement (-65% in *Lenta* and -30% in *Gazeta*), and Citizens and the State (-60% in *Lenta* and -20% in *Gazeta*). These findings align with those of the overview of keywords, emphasising an especially dramatic reduction in coverage about economic and legal issues. Moreover, they prove that the shift away from a line similar to that of *Novaya Gazeta*, *Vedomosti*, and *Grani*, coincided with the introduction of new editors.

Conclusion

Since about 2012 the Kremlin has actively sought to bring large internet companies within a state-controlled ownership structure (Soldatov and Borogan 2015; Pallin 2016). In 2013-14,

these efforts entered a more active phase, as the owner of the most popular online newspapers introduced editors from outside, rather than promoting journalists from within. *Gazeta* and *Lenta* became victims of their own success: dominating online news, an increasingly significant information source for Russians, they were too influential to be allowed to operate independently. The likelihood that editors are able to maintain an independent line - such as Alexei Venediktov has achieved at the *Echo of Moscow* thanks to his personal connections and despite the radio station being owned by Gazprom - appears inversely related to an outlet's reach and popularity.

In this article I have sought to identify which areas of coverage were - quantitatively - the most affected by the decision to introduce loyal editors. The results obtained by triangulating the category, keyword, and topic model data all point in broadly same direction: under new editors, *Gazeta* and *Lenta* greatly expanded the lifestyle and human interest sections. Simultaneously, the online newspapers have dramatically reduced their coverage of the business dealings of Russia's elites, and, most clearly, financial crime. Analyses about media freedom, editorial movement, as well as the internet and social media were also in sharp decline. Both the keyword analysis and topic model data point to legal injustice and corruption as the main area to see dramatic reductions. This pattern is not random: the topics with the highest independence likelihood all virtually disappeared from *Lenta* and *Gazeta*'s news coverage under new editors. This is true for reporting about injustice, big business, and the Russian opposition. In each of these cases, the effect of the loyal editor can be quantified as a 50% or greater reduction in coverage. As striking as these findings are, what is absent is every bit as noteworthy: in purely quantitative terms, coverage of the Ukraine crisis has remained largely unchanged, while *Lenta* coverage about the Russian government has moved in the opposite direction of *Gazeta*'s. This result shows the importance of qualitative analyses of media coverage; much more work is needed in this area.

The issues that saw the greatest increases and decreases in attention highlight the nature of the change introduced at *Lenta* and *Gazeta*: it is simultaneously decisive and incremental. Decisive, because coverage of certain issue areas, incompatible with the new editorial line, immediately disappeared. Elsewhere, though, changes are incremental, because the new teams sought to retain old readers. The result is not newspapers suddenly full of pro-Putin propaganda, as suggested by the Freedom House reports; nor is it a full shift to the tabloid priorities spelled out by Kashin. The result is rather more insipid: critical investigations into the corrupt dealings of Russia's elites were not simply replaced one for one by eulogies to Putin or rants about Western interference in Ukraine. Instead they were replaced by articles about health, history, real estate, recipes, or animals.

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Table 1

Personal Finance	Mortgage (n), foodstuffs, mortgage(adj), credit(adj), table, milk, accommodation, architect, rent, buyer, apartment, countryside, property, credit(n), debtor, salary, yard, car, worker,
Health	Disabled(n), patient(n), sick person, doctor, wound, medical, drug
Family, lifestyle	Girl, mother, college, class, woman
History	Stalin, [Grigorii] Yavlinskii ¹¹
Conflict	Conflict, rape/violence(n), war, fear
Miscellaneous	Display, new-year(adj), colour, <i>rosstat</i> (Federal State Statistics Service)

Table 1: Keywords at least 50% overrepresented in both Gazeta and Lenta after editorial change, measured against each newspaper's previous publication pattern, and based on estimated keyword distributions in the reference groups.

Table 2

Business	company, NOVATEK ¹² , investor, state-owned bank, bribe, trade, allocation, assets, state-owned company, loss, monopoly, energy, trader, deal, shareholder, director, stock exchange, merger, [Norilsk] Nickel , Vimpelkom , Naftogaz , capitalisation, state-programme, management, drain, share, [oil] well, frequency
Legal	Lawyer, evidence, murder, investigator, application, accused, petition, high [court], applicant, jury(adj), European Court of Human Rights, jurisdiction, extension, [Aleksandr] Bastyrkin ¹³
Crime, security	Extremism, catastrophe, surveillance, attempt at [murder]
Bureaucracy, politics	Paragraph, independence, decree, [electoral] monitoring(adj), report
Elites	[Alisher] Usmanov, [Dmitrii] Kiselev, [Vladimir] Potanin, [Galina/Gennadii] Timchenko, [Yurii] Shevchuk, [Ramzan] Kadyrov
Media	Editorial staff, Kommersant, TV-channel, [Internet] domain, publishing [house], monitoring

Table 2: Keywords at least 50% underrepresented in both Gazeta and Lenta after editorial change, measured against each newspaper's previous publication pattern, and based on estimated keyword distributions in the reference groups.

¹² Russia's largest producer of natural gas

¹³ Head of the Investigative Committee of Russia (2011 -)

List of captions for figures:

- *Figure 1: Output by category, before and after editorial change for Gazeta and Lenta. Percentage change is given in brackets*
- *Figure 2: Topics the most and least likely to be the subject of articles published by the group of independent publications. Proportions are shown with bootstrapped 95% confidence intervals*
- *Figure 3: Proportion of articles in Lenta about the topic Court cases. The dashed lines is the predicted value based on the reference publications, while the solid line denotes observed values. The shaded area is denotes the 95% credible confidence interval.*
- *Figure 4: Overview of the loyal editor effect for topics with the highest independence likelihood, as estimated using a bayesian structural time series model. The estimate column shows a 95 % credible confidence interval around the percentage estimated loyal editor effect. Additionally, this effect is given as a fraction, with standard error, and statistical significance. ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.*